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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,823	07/03/2001	Chris Eberspacher		1107

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EXAMINER

TSOY, ELENA

ART UNIT PAPER NUMBER

1762

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,823

Applicant(s)

EBERSPACHER ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Amendment

Amendment filed on June 8, 2004 has been entered. Claims 1-50 have been cancelled.
Claims 51-61 are pending in the application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 51-53 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement for the reasons of record as set forth in Paragraph No. 2 of the Office Action mailed on March 8, 2004.
3. Claims 54-58 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement for the reasons of record as set forth in Paragraph No. 3 of the Office Action mailed on March 8, 2004.
4. Claims 59-61 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement for the reasons of record as set forth in Paragraph No. 4 of the Office Action mailed on March 8, 2004.

Response to Arguments

5. Applicants' arguments filed June 8, 2004 have been fully considered but they are not persuasive.

(A) Applicants argue that "mixed-metal metal oxide particles" recited in Claims 51 are disclosed in examples 1 and 8 of the original specification. Example 1 addresses single-phase

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mixed-metal, $\text{Cu}_2\text{In}_2\text{O}_5$ particulate materials”, and Example 8 addresses single-phase mixed $\text{Cu}_2\text{In}_{1.5}\text{Ga}_{0.5}\text{O}_5$ particulate materials.

The Examiner respectfully disagrees with this argument. First of all, a phrase “mixed-metal metal oxide particles” recited in Claims 51-53 cannot be interpreted as “mixed-metal oxide particles” since according to Applicants, oxides of two metals are addressed not as “mixed-metal metal oxide particles” but as “mixed-metal oxide particles” (See Claim 59). Therefore, the phrase “mixed-metal metal oxide particles” recited in Claims 51-53 can be interpreted only as metal oxide particles mixed with metal phase. Thus, “mixed-*metal* metal oxide particles” of Claims 51-53 include a metal phase.

Contrary to Applicants’ statement, a method of preparing “mixed metal, $\text{Cu}_2\text{In}_2\text{O}_5$ particulate materials” of example 1 is not a method of preparing claimed “mixed-metal metal oxide particles” of Claims 51 comprising a metal phase since the method described in example 1 comprises heating copper *nitrate* and indium *nitrate* in *oxygen* which results in *oxide* particulates with no metal phase.

Also contrary to Applicants’ statement, example 1 does not disclose *dissolved metals* (as recited in Claim 51, line 4), but copper *nitrate* and indium *nitrate* which are heated in *oxygen* resulting in *oxide* particulates. Thus, example 1 does not show a method of preparing single-phase particles having *metal phase* and metal oxides. One of ordinary skill in the art at would know that it is impossible to produce free (reduced) metal from nitrates in an *oxidizing* atmosphere. Moreover, the specification as filed discloses that while pyrolyzing metal-containing compounds, **metal** phase can be achieved only in **reducing** atmosphere not in *oxidizing* atmosphere (See page 11, paragraph 2).

Example 8 also does not disclose a method of preparing single-phase particles having a *metal* phase and metal oxides since it is a method of example 1, except for the use of gallium nitrate instead of a portion of indium *nitrate*.

(B) Applicants argue that mixed-metal particles of Claims 54 comprising Cu in metallic phase and In and/or Ga in an oxide phase by pyrolyzing droplets of solutions comprising dissolved metals, e.g. Cu, In and/or Ga in reducing atmosphere is disclosed in Example 3 and pages 11-12 of the original specification.

The Examiner respectfully disagrees with this argument. In contrast to Applicants' statement, Example 3 and pages 11-12 of the original specification describe pyrolyzing in reducing atmosphere droplets of solutions of **nitrates**, which are *dissolved* metal-containing *compounds* not *dissolved metals*.

(C) Applicants argue that the preparation of mixed- metal oxide particles while pyrolyzing droplets of solutions comprising dissolved metals e.g. Cu, In and/or Ga in an inert atmosphere is disclosed in the second paragraph on page 11 of the original specification where multi-phase, mixed metal, Cu₂O-In₂O₃ oxide particulate materials were prepared in an inert atmosphere, namely nitrogen.

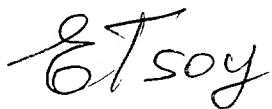
The Examiner respectfully disagrees with this argument. In contrast to Applicants' statement, the second paragraph on page 11 of the original specification describes that mixed metal, Cu₂O-In₂O₃ oxide particulate materials can be prepared by pyrolyzing in an inert atmosphere, namely nitrogen, droplets of solutions of **nitrates**, which are *dissolved* metal-containing *compounds* not *dissolved metals* (See lines 6-9 of the second paragraph on page 11 of the original specification).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Elena Tsoy
Primary Examiner
Art Unit 1762

July 19, 2004